

16 October 2018

NANOCO GROUP PLC
("Nanoco" or the "Company")

Preliminary Results for the year ended 31 July 2018

Nanoco Group plc (LSE: NANO), a world leader in the development and manufacture of cadmium-free quantum dots and other specific nanomaterials emanating from our technology platform, is pleased to announce its preliminary results for the year ended 31 July 2018.

Operational highlights

The Group's nano-material platform technology supports opportunities across a wide range of markets and end-user applications. Recent performance in a number of these is summarised below:

Nano-materials (for use in the electronics industry)¹

- Excellent progress in the execution of material development and supply agreements with undisclosed US Company
- £2.6 million received in milestone payments and fees from these contracts during the year
- Development of new manufacturing facilities in Runcorn, funded by £2.9 million advance payments by US Company against discounted future product sales
- Expansion project on track to complete by 31 December 2018
- Exploring further revenue generating commercial service opportunities in advance of product sales

Display

- R&D activity changed focus during the year to improve dot performance in line with ever increasing technical requirements of the display industry
- Internal development and production resources pivoted away from Display to focus on the immediate nano-materials opportunity in the electronics market (noted above)
- Progress in Display continues to be hampered by the slow pace of market evolution
- Working with Wah Hong to provide film to a Taiwanese display panel maker targeting the gaming monitor niche. Revised customer launch date pushes back sales, previously expected in the 2018 Christmas holiday season

Lighting

- Continue to explore a number of specialist applications in the UK and US, specifically targeting commercial vertical farms for vegetables and sports turf
- CareWear® (one of Carewear Corp's products) gaining early traction in the US

Life sciences

- Further progress in exploring potential uses of the Company's CFQD technology for imaging and diagnosis of cancer
- Initial toxicology tests passed successfully

Financial highlights

- Significant increase in billings to £6.5 million (2017: £1.1 million)
- Revenue and other operating income more than doubled to £3.5 million (2017: £1.6 million)
- Loss after tax cut to £6.0 million (2017: £9.1 million) with £1.5 million full-year benefit of prior year cost reductions
- £7.9 million net proceeds from November 2017 fundraise
- Cash position increased to £10.7 million (31 January 2018: £8.7 million; 31 July 2017: £5.7 million), sufficient to fund Group assuming commercial production revenues early in H1 FY20. Cash includes an amount of £0.8 million received from a customer for the purchase of capital equipment. The cash cannot be used for any other purpose.
- Contingency plans in place to reduce costs and preserve cash in event of further delays to commercial revenue streams.

¹ The Group's platform technology is built on nano-materials. Nano-materials for use in the electronics industry are one subset of that platform. CFQD® quantum dots are another subset.

Dr Christopher Richards, Nanoco's Chairman, commented on the results:

"The last year has clearly shown the benefits of Nanoco's technological leadership, with some potentially very attractive commercial opportunities emerging in the short term. The rapid re-deployment of our internal resources to focus on emerging and attractive nano-materials opportunities demonstrates our agility and the strength of the Group's technology platform, which allows us to respond quickly to our existing customers and to new unmet needs and opportunities that are emerging.

Our challenge is to execute and deliver on those opportunities within the constraints of our current resource base. The Executive team is alert to the potential of further delays in the realisation of those opportunities and contingency plans are in place to manage further delays to our commercial development.

While there are still hurdles to overcome and a degree of uncertainty to be navigated, the Group is currently actively engaged in potentially transformative technological and commercial activities. The Board is therefore confident about the relevance of our technology and excited about the prospects for the Group in both the short and the long term."

Analyst meeting and webcast details

To listen to a webcast of the analyst briefing, please log on to the following web address approximately five minutes before 8.30am on 16 October 2018:

<http://webcasting.brrmedia.co.uk/broadcast/5bbde6c4269b0c1ded189741>

A recording of the webcast will also be made available on Nanoco's website, www.nanocogroup.com, later today.

A meeting for analysts will be held at 8.30am this morning, 16 October 2018 at the offices of MHP Communications, 6 Agar Street, WC2N 4HN. For further details please contact MHP Communications on 0203 128 8570.

For further information, please contact:

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Notes for editors:

About Nanoco Group plc

Nanoco (LSE: NANO) harnesses the power of nano-materials. Nano-materials are materials with dimensions typically in the range 1 - 100 nm. Nano-materials have a range of useful properties, including optical and electronic. Quantum dots are a subclass of nano-material that have size-dependent optical and electronic properties. The Group produces quantum dots. Within the sphere of quantum dots, the Group exploits different characteristics of the quantum dots to target different performance criteria that are attractive to specific markets or end-user applications such as the Display and Electronics markets. One of the interesting properties of quantum dots is photoluminescence: the emission of longer wavelength light upon excitation by light of a shorter wavelength. The colour of light emitted depends

on the particle size. Nanoco's CFQD® quantum dots are free of cadmium and other toxic heavy metals, and can be tuned to emit light at different wavelengths across the visible and infrared spectrum, rendering them useful for a wide range of applications including displays, lighting and biological imaging.

Nanoco has non-exclusive manufacturing and marketing licensing agreements in display with The Dow Chemical Company, Merck KGaA of Germany and Wah Hong Industrial Corporation of Taiwan.

Nanoco was founded in 2001 and is headquartered in Manchester, UK, with a US subsidiary, Nanoco Inc., in Concord, MA. Nanoco continues to build out a world-class, patent-protected IP portfolio generated both by its own innovation engine, as well as through acquisition.

Nanoco is listed on the Main Market of the London Stock Exchange and trades under the ticker symbol NANO. For further information please visit: www.nanocogroup.com.

Chairman's statement

Introduction

This has been a year of substantial progress for Nanoco, most notably in relation to our agreements with a new customer in the electronics industry ("the US Company") to develop and produce advanced nano-materials. These new contracts, first announced in February 2018, represent a significant win against competition from major international companies. They demonstrate our capability in the design of nano-materials and our ability to scale up production to commercial volumes. Potential further agreements are in discussion which are expected to remove the material uncertainty that we face with respect to reducing our cost base if commercial revenues are further delayed.

At the same time, we continue to invest in cadmium-free quantum dots (CFQD[®] quantum dots) for other sectors. We have made progress towards commercialisation in the Display sector, while developing the applications of our technology in both the Life sciences and Lighting sectors. Meanwhile, our new investment in 2-D nano-materials, in collaboration with the University of Manchester, will help to keep the Group at the forefront of developments in material science in this exciting area.

Business performance

Building on the global technological lead which Nanoco has developed over recent years, the nano-materials contract wins with the US Company are a recognition of both the Group's strong capabilities, and our highly skilled and adaptable professional staff. The Group has taken advantage of our strengths in technology and agility, to respond quickly to new commercial opportunities as they have arisen and where the potential is significant. Our manufacturing capability at Runcorn and our laboratories in Manchester are being substantially improved in readiness to enter commercial production of specific nano-materials and to develop improved versions of them. Good progress is being made in building the new customer-funded production facilities at Runcorn.

The performance of our CFQD[®] quantum dots will allow us to capitalise on commercial opportunities as they arise. The pressure on the electronics industry to remove toxic cadmium from the supply chain will add to the attractions of our products. This remains a critical investment for the Group. While movement of the commercial display market to quantum dots has been slower than anticipated, we are actively pursuing 'early adopter' niches such as gaming monitors. We also continue to support our licensees in their efforts to access the large-scale TV display market.

Specialist lighting applications continue to make progress. We look forward to the full launch of CareWear[®] products in the coming financial year, while potential horticultural commercial sales are also currently being negotiated. Vertical farming is an area which is receiving very large investment and we believe our lighting technology is capable of delivering significant yield and quality benefits to growers.

In Life sciences, we have made important progress in demonstrating the safety-in-use of our materials. This will allow us to move forward towards the development of commercial applications in several therapeutic areas which we have identified as most relevant for our technology. The Board recognises that Life sciences requires different capabilities from our core electronic materials businesses and is exploring a number of strategic options, including a possible spin-out and / or partnership of this business line.

In 2017 we set up Nanoco 2D Materials Limited to develop next generation 2-D materials, in collaboration with the Nobel Laureate Professor Konstantin Novoselov. The project is jointly funded with the University of Manchester. This early stage research has the potential to take the Group into new areas of nano-materials and keeps us at the leading edge of this sector.

Financial performance

Revenues and other operating income in the year to 31 July 2018 were £3.5 million (2017 £1.6 million) and the loss before tax was £7.4 million (2017: loss before tax of £10.9 million). Cash consumption during the year, excluding the benefit of the net £7.9 million equity raised in November 2017, was £3.0 million. With the Group still being at a pre-commercial production stage in its evolution, our financial focus remains firmly fixed on close management and control of our cost base and cash resources. Cash, cash equivalents and deposits at the year end were £10.7 million (31 July 2017: £5.7 million; 31 January 2018: £8.7 million). No dividend is proposed for the year (2017: none).

Governance and Board

The Board recognises the value of meeting the highest standards of corporate governance and will continue to strive to achieve such standards for the benefit of all stakeholders.

Following the resignation of Keith Wiggins, the Group's former COO, the Board concluded that an individual with a background in finance and a strong grounding in operational management would be the right match for the CEO and CTO. The Board decided therefore to create a new combined role of Chief Operating Officer and Chief Financial Officer to be based in the UK.

Brian Tenner was appointed to this new combined role, effective from 20 August 2018, with previous CFO David Blain standing down from his position on the Board as a result of this reorganisation. David remained involved in the business until 15 October 2018 in order to effect an orderly handover of the CFO duties.

Brian brings significant experience of performing operational finance roles in a number of diverse industries. He also brings broad experience of leading publicly listed businesses through transformation and change at critical points in a business lifecycle. I welcome Brian to the Board and would like to thank Keith and David for their contributions to the Group during their tenure.

Employees and shareholders

On behalf of the Board, I would like to pay tribute to Nanoco's employees for their achievements during the year. This has been an exceptionally busy year, even by our own standards. The Group's exceptional, multi-national team has responded with remarkable professionalism, flexibility and dedication. The Board is enormously appreciative of their contributions and commitment to the Group.

I would also like to thank our shareholders for their continuing support and look forward to meeting as many as possible at our AGM to be held on 14 December 2018.

Outlook

The last year has demonstrated the benefits of the technological leadership which the Group has developed. There are some potentially very attractive commercial opportunities emerging in the short term with a particular focus on the electronics market. Our challenge is to execute and deliver on those opportunities within the constraints of our current resource base. The Executive team is alert to the potential for any further delays in the realisation of those opportunities and contingency plans are in place to manage any further delays to our commercial development.

While there are still hurdles to overcome and a degree of uncertainty to be navigated, the Group is currently actively engaged in potentially transformative technological and commercial activities. The Board is therefore confident about the relevance of our technology and excited about the prospects for the Group in both the short and the long term.

Dr Christopher Richards
Chairman
16 October 2018

Chief Executive Officer's review

Overview

This has been an exciting but challenging year for the Group. We have seen significant new opportunities open up in the electronics industry. These opportunities are a recognition of our world-leading capability to design and produce commercial volumes of nano-materials. We have committed significant resources to further enhance the capabilities of our team which has enabled the Group to improve the materials offered. We have formed a close working relationship with a US Company which has demonstrated their commitment and belief in Nanoco with a number of valuable collaborative contracts.

The challenges have included setbacks in display, where our progress in getting a commercial product to market has suffered further delays, and the commercial supply of nano-materials to the US Company, which has been pushed back to the second half of calendar year 2019. This impacts our revenue expectations for the coming year which are now lower than they would otherwise have been.

The Group raised £8 million of additional equity funding in November 2017 to support our further development. We are maintaining close control of our cost base to take advantage of the restructuring carried out in the prior year. Our goal is to manage the business within our existing resources until we are generating meaningful cash flows from one or more of our key market sectors. Our medium-term goal is to achieve a self-sustaining level of annual cash flows.

Nano-materials for the electronics industry

Building on our world leading understanding of nano-materials and our capability to scale-up commercial production, we identified a potentially valuable opportunity in the electronics market. The US Company has brought a number of well-funded contracts to the Group during the year. These projects have focused on scaling-up and manufacturing specific nano-materials. In order to be ready for the commercial production of these new materials, we have designed, built and are in the process of fitting out a new manufacturing facility at the Group's Runcorn site. The new nano-material manufacturing facility is on schedule to be completed by 31 December 2018.

We will then continue to push the performance capabilities of our materials and expect to begin delivery of commercial production volumes of material in the second half of the 2019 calendar year. We are part of an extensive supply chain in the electronics market and, as we announced during the past year, our own future performance and activities are subject to changes outside our control. We are therefore continuing to carefully manage and match our resources to value adding activities. While our work is currently focused on one large commercial opportunity, our materials have clear benefits in a wide range of applications and markets, both within the electronics sector but also in broader industrial sectors. The Group is also actively exploring further commercial research and development opportunities to exploit in the period leading up to full scale production.

Display

We recognise that our display business continues to take longer than originally anticipated to deliver meaningful commercial revenues. The technical demands of the display industry have also continued to increase and so we have allocated more of our R&D resources to improving the performance of our CFQD[®] quantum dots in order to keep pace with these demands.

Two years ago we modified our strategy from a pure licensing model to a hybrid business model; we have licensed our technology to three different channel partners while also developing our own manufacturing capability. We have continued to work with our licence partners Dow, Merck and Wah Hong as our R&D efforts lead to enhanced product performance, in order to support their efforts to reach commercial sales agreements with their own potential customers. We also continue to receive modest minimum licence fees and royalty payments from our partners.

Our own direct sales efforts are targeted on specific OEM's within the display sector. In the near term we have focused on gaming monitors as a first step on the technology pathway to broader adoption of quantum dots in television mass markets. It remains the case that the Group is part of a relatively long supply chain and any delays in that chain which impact product launch dates can have a considerable knock-on effect on when commercial revenues can be achieved by Nanoco.

As noted above, the broad base of our nano-material platform technology (of which CFQD[®] quantum dots are a sub-set), has allowed us to pivot a significant proportion of our development and manufacturing resource away from Display to take advantage of the electronics industry opportunity with the US Company. This nano-materials opportunity is both more near term and potentially more commercially significant over the next two financial years than any of the current display opportunities which continue to be held back by the slow pace of market development. It is the strength in depth and skills developed in our Display business over recent years that has allowed us to take advantage of this alternative nano-materials opportunity. Meanwhile, we will continue to invest in CFQD[®] quantum dots R&D and to explore the short to medium-term commercial opportunities that the Display industry offers.

Specialist lighting

The properties of properly tuned light in accelerating both plant growth and the quality and freshness of vegetables in particular is well documented. The Group's CFQD[®] quantum dots have been found to be particularly effective in improving crop yields in both quantity and quality. The Group is working closely with potential lighting manufacturing and installation companies which are targeting indoor (vertical) farms. The vertical farming sector is currently attracting substantial investment and is set to grow rapidly over the coming years. The Group's CFQD[®] quantum dots are well placed to support this activity and a number of near-term commercial opportunities are being worked on.

Nanoco is working with CareWear[®] Corp., a developer and manufacturer of patented wearable therapeutics that emit specific wavelengths of light to help professional athletes and patients recover from injuries faster. CareWear's FDA registered light therapy delivery system features the first fully flexible, wearable, ultra-slim light patches that integrate Nanoco's CFQD[®] quantum dot films, along with a proprietary printed LED substrate, and a hydrogel interface to adhere the patches to the skin.

CareWear's light patches deliver PhotoBioModulation (PBM) therapy using a combination of blue and red light to relax muscles, improve circulation and treat inflammation, which reduces pain and promotes tissue healing following injury.

Recent university research has shown that CareWear's wearable therapeutics have a significant effect on recovery from exercise. Professional sports teams are beginning adoption of CareWear's light patches as part of the initial deployment strategy into the sports markets. CareWear[®] is currently shipping product in commercial quantities and anticipates its wearable light patches to become a standard of care for the immediate treatment of soft tissue injuries and reduction of recovery time following intense activity. We expect demand to grow now that the product is commercially available.

Life sciences and Solar

Nanoco Life sciences continued to make meaningful pre-clinical progress in the development of our cancer imaging and diagnostic agents. The materials have passed initial toxicology tests; further tests are due to complete during the first half of calendar 2019. We believe that significant commercial progress for our Life sciences business line will depend on attracting the right strategic development partner. The Group is taking the initial steps to identify such a partner.

Separately, the Group continues to pursue the license of its Solar assets.

Production capability - Runcorn

We have made a major investment in our Runcorn production facility during the year. The majority of the Group's capital expenditure in the year related to the expansion at Runcorn for production of nano-materials for the US Company mentioned above.

The cost incurred during the year was £2.0 million and the estimated total cost of expanding the facility is approximately £4.0 million. Funding for the expansion project was provided as part of one of the collaboration agreements with the US Company. The end result will be a doubling of the production footprint at Runcorn and the new facility will have new production equipment, more than capable of meeting the demanding specifications for our nano-materials in an electronics supply chain.

Environment / Restriction of Hazardous Substances ("RoHS")

Nanoco is committed to protecting the environment in which our activities are conducted. This commitment is directly expressed in our decision to develop our CFQD® quantum dot products to be free of toxic cadmium, which is still widely used by our competitors in their quantum dot products.

Nanoco has participated actively with regulators on the use of cadmium-based quantum dots in displays and LED light products. The European Commission (EC) revised the RoHS exemption last year so that it immediately ceased for lighting and will end on 31 October 2019 for display products, after which the normal RoHS limit for cadmium of 100ppm will apply. Nanoco expects that regulations in other key markets, including China, will fall in line with RoHS in future. Meanwhile, our contacts with display companies indicate that most already accept the need for new display products to be cadmium-free - especially the world leading brands in television, computer monitor and laptop displays. The current legal exemption from the cadmium free requirements of RoHS was subject to a final review by the EC as in April 2018 one European lighting company and one Chinese QD company requested a further extension.

The EC has also started a project to review the list of toxic substances that are restricted under RoHS regulations and to review how to evaluate exemption requests. Indium Phosphide (InP) is included in materials to be considered for future inclusion in the RoHS restricted materials list because it is rated as a probable carcinogen. However, it is far less harmful and does not persist in the environment as cadmium does. It is important to note that Nanoco does not use InP in its CFQD® quantum dots, which have been tested and shown to be non-toxic for potential medical use in cancer imaging and diagnostics. The EC has also included in this package of work one new request for cadmium based QDs to be used in 'on-chip' LED lighting applications. Nanoco is actively participating in the review process for the proposed RoHS changes and continues to champion the use of safer alternatives to cadmium-based QD.

People

Our employees are our strongest asset. It is their technical skill and ingenuity which allows the Company to continue to aggressively innovate and remain at the leading edge of our industry. We therefore remain committed to ensuring that they have access to the appropriate resources to keep their skills and experience up to date. The additional focus this year on our nano-material opportunity was an example of where we were able to leverage our scientifically broad based skill set and technical know-how.

Outlook

It has been a challenging year for the Group due to changes in programme launches by both our existing and potential new customers which have had an adverse impact on revenue expectations. In response to these delays we continue to maintain close control of our cost base and our cash resources. We remain alert to the uncertainty around our short term revenue and cash flow expectations. We have developed contingency plans that will give the Group time to deal with any further potential delays in realising new commercial revenue generating opportunities.

On the upside, the rapid progress in developing our nano-materials into a viable product for use in a highly demanding electronics environment is a testament to the unique capabilities of the Group, the flexibility of each member of our staff and the agility of the organisation as a whole. While currently focusing on one specific and, for Nanoco, significant commercial opportunity, we continue to explore other avenues to sell our expertise and high performing nano-materials. These near term electronics opportunities will necessarily divert some production resources away from our Display business where our short term focus will be on R&D improvements to the performance of our dots so that medium term commercial opportunities can be exploited as they emerge.

We are also negotiating a number of new commercial revenue opportunities for our services in advance of material production revenues and will inform the market as they are won. Our current pipeline of opportunities is expected to support revenues in 2019 that are around double those achieved in 2018. We remain positive about the opportunity ahead of us. The Group has sufficient funding assuming commercial production revenues begin early in the first half of FY20. By managing the uncertainty and challenges around our current short term commercial opportunities we can deliver a transformative change in the Group's evolution that will create a robust foundation for our longer term future.

Dr Michael Edelman
Chief Executive Officer
16 October 2018

Financial review

Results

Revenue for the year was £3.3 million (2017: £1.3 million) and the loss before tax was £7.4 million (2017: £10.9 million).

Revenue and other operating income increased by 114.7% to £3.4 million (2017: £1.6 million).

Revenue from sale of products and services rendered accounted for 95.6% (2017: 53.6%) of revenues with the balance being royalty and licence income. Revenue from sale of products was £0.2 million (2017: £0.5 million).

Revenue from royalties and licences and revenue from the joint development agreements which comprise payments from customers to gain preferential treatment in terms of supply or pricing do not have an associated cost of sale. Cost of sales increased by £0.1 million to £0.4 million (2017: £0.3 million) as a result of increased sales.

The generation of cash for the Group is important and as a result the level of billings is considered a key performance indicator. Billings have increased by £5.4 million to £6.5 million (2017: £1.1 million) as a new development and supply agreement was signed during the year.

	2018 £ million	2017 £ million
Value of sales invoices ("billings") raised during the year	6.5	1.1
Movement in deferred income from last year end to this year	0.1	0.5
Less revenue deferred to future years	(3.1)	-
Revenue and other operating income per consolidated statement of comprehensive income	3.5	1.6

The decrease in research and development expenditure of £1.5 million to £4.0 million (2017: £5.5 million) comprises decreases in R&D labour costs of £0.9 million, material costs and utilities totalling £0.6 million. Labour costs represent 77.4% (2017: 72.8%) of total R&D costs with the balance of costs comprising materials and utility costs.

Total payroll costs (before the charge for share-based payments) decreased by £0.4 million to £5.3 million (2017: £5.7 million). The decrease in payroll costs is attributable to a 21.8% decrease in average staff numbers compared to 2017 largely due to the restructuring that occurred in December 2016. The decrease in administrative costs of £0.3 million to £6.5 million reflects decreased professional fees (£0.3 million), depreciation (£0.2 million) offset by increases in employee costs (£0.3 million).

Non-GAAP measures

The non-GAAP measures of adjusted operating loss and loss before interest, tax, amortisation and share-based payment charges ("LBITDA") are provided to show the operating loss and loss before interest and tax, before including non-cash charges and large non-recurring items, in order to give a clearer understanding of the loss for the year that reflects cash outflow from the business.

The adjusted operating loss* for the year ended 31 July 2018 was £7.2 million (2016: £10.7 million).

LBITDA was as shown in the table below:

The decrease of £3.3 million in LBITDA compared to 2017 is a result of the higher revenue leading to an increase in gross profit of £1.8 million, a decrease in other operating income of £0.1 million and a net decrease in R&D and administrative costs of £1.6 million (excluding the items added back in the table below).

	2018 £ million	2017 £ million
Operating loss	(7.4)	(10.9)
Share-based payment charge	0.2	0.2
Adjusted operating loss*	(7.2)	(10.7)
Depreciation	0.5	0.7

Amortisation	0.5	0.5
LBITDA	(6.2)	(9.5)

The loss before tax was £7.4 million (2017: 10.9 million).

The tax credit for the year is £1.4 million (2017: £1.8 million). The tax credit to be claimed, in respect of R&D spend, is £1.4 million (2017: £1.8 million). Overseas corporation tax was £nil million during the year (2017: £0.1). There was no deferred tax credit or charge (2017: £nil).

Cash flow and balance sheet

During the year cash, cash equivalents, deposits and short-term investments increased by £5.0 million to £10.7 million (2017: £5.7 million) largely as a result of the fundraise of net £7.9 million offset by cash outflow from operating activities. At 31 July 2017, cash and cash equivalents include an amount of £840,000 received from a customer for the purchase of capital equipment. The cash cannot be used for any other purpose.

Tax credits of £1.8 million (2017: £2.0 million) were received during the year.

The Group increased its capital spend in tangible assets in the year to a total of £2.2 million (2017: £0.4 million). Expenditure incurred in registering patents totalled £0.8 million (2017: £1.2 million) during the year reflecting the Group's continued focus on developing and registering intellectual property. Capitalised patent spend is amortised over ten years in line with the established Group accounting policy.

On 14 November 2017 the Company's shareholders voted in favour of a placing of 19.9% of the Company's issued share capital raising approximately £7.9 million net of costs. This fundraise strengthened the Company's balance sheet and helped to alleviate going concern issues.

Treasury activities and policies

The Group manages its cash deposits prudently. Cash deposits are regularly reviewed by the Board and cash forecasts are updated monthly to ensure that there is sufficient cash available for foreseeable requirements.

More details on the Group's treasury policies are provided in note 26 to the preliminary results.

Credit risk

The Group only trades with recognised, credit-worthy third parties. Receivable balances are monitored on an ongoing basis and any late payments are promptly investigated to ensure that the Group's exposure to bad debts is not significant.

Foreign exchange management

The Group invoices most of its revenues in Sterling and also has US Dollar and Euro revenues. The Group is therefore exposed to movements in those currencies relative to Sterling. The Group will use forward currency contracts to fix the exchange rate on invoiced or confirmed foreign currency receipts should the amount become significant. The Group does not take out forward contracts against uncertain or forecast income.

There were no open forward contracts as at 31 July 2018 (2017: none). The Group's net profit and its equity are exposed to movements in the value of Sterling relative to the US Dollar. The indicative impact of movements in the Sterling exchange rate on profits and equity-based on the retranslation of the closing balance sheet are summarised in note 26 to the preliminary results and were based on the year-end position.

Significant accounting judgements

Set out below are the key accounting matters and judgements assessed during the year:

- Revenue recognition and deferred income
- Carrying values of intangible assets
- Going concern
- The impact of IFRS 15, Revenue from Contracts with Customers

The audit committee was closely involved in the above accounting matters and judgements and further details are set out in the Audit Committee's report.

A key area is the assessment of going concern due to the existence of the material uncertainty regarding management's ability to implement the necessary cost savings in appropriate timely manner should expected revenues not be secured and further details of this assessment are set out in note 2(c). Nevertheless, considering the mitigating actions that can be made and after making enquiries and considering the uncertainty described above, the Directors have a reasonable expectation that the Group has access to adequate resources to continue in operational existence for the foreseeable future. Accordingly they continue to adopt the going concern basis in preparing the Consolidated preliminary results and the Board concluded that it is appropriate to utilise the going concern assumption.

Principal risks and uncertainties

In common with all businesses at Nanoco's stage of development, the Group is exposed to a range of risks, some of which are not wholly within its control or capable of complete mitigation or protection through insurance. Specifically, a number of the Group's products and potential applications are at a research stage and hence it is not possible to be certain that a particular project or product will lead to a commercial application. Other products require further development work to confirm a commercially viable application. Finally, a number of products are considered commercially viable but have yet to see demand for full scale production level quantities. There are a range of risks therefore that are associated with the different stages of product development as well as for the Group as a whole.

The Board has established a routine process for carrying out a robust risk assessment which evaluates and manages the principal risks faced by the Group. The Board reviews the process and a detailed review of risks was undertaken by the Audit Committee during the financial year ended 31 July 2018. The Board has also established an acceptable level of risk (risk appetite) which is used to inform the scale and urgency of actions required. Where risks are deemed to be outside management control, efforts are focused on mitigating any potential impact. Where all practical measures to prevent or mitigate risks have been taken and a residual element of risk still remains, these risks are accepted by the Group.

Risks are evaluated with respect to probability of occurrence and the potential impact if a risk crystallised. Where the Group has identified risks, these are monitored with controls and action plans to reduce the probability of a risk crystallising and the impact of each potential event if it did occur.

The principal over-arching strategic risk faced by the business is that the Group exhausts its available funding before achieving adequate levels of commercial revenues and cash flows to be able to be self-funding. As described in note 2(c), the Directors consider that a material uncertainty exists regarding the Group's ability to implement the required cost savings within the necessary timeframe, as indicated in the downside case, should expected revenues not be secured. The new agreement with a US Company, agreed in early 2018, provides attractive cash generating opportunities. However, the natural consequence of having this attractive new agreement is that the Group is now inevitably exposed to a new risk in the short term of 'key customer reliance'. The Group is exposed to the risk of any delays in the future supply of commercial quantities of products to this new customer in the same way that the Group is exposed to delays in the widespread adoption of quantum dots in display markets. These factors both increase the risk of not becoming self-funding before existing cash resources are exhausted. The terms of the agreement with the US Company also require specific deliverables and milestones to be achieved. Both are being actively managed and as milestones are achieved and additional customer relationships are formed these risks will inevitably reduce. Commercial negotiations are ongoing to secure additional revenues to mitigate the exposure in this area. As set out in the going concern statement in note 2(c), management has identified the short term actions that would need to be taken if no further sales contracts are agreed.

Summary

We are carefully managing our cash resources and cost base in the period running up to the expected delivery of commercial production revenues in the first half of the financial year ending 31 July 2020. This approach to our cash and cost base reflects an appropriate level of caution given that there is

inevitably some uncertainty surrounding the timing of commercial revenues which are not yet subject to contract. There is then an associated material uncertainty which is referenced in the Going Concern Statement with regard to the timeliness and effectiveness of any contingency plan around our cost base that has to be implemented in the event of commercial delays.

The Group has sufficient financial resources to sustain the expected level of operating losses and cash burn assuming commercial production revenues are achieved early in the first half of the financial year ending 31 July 2020. On delivering commercial production revenues the Group then expects to be able to significantly reduce our operating losses and cash outflows with a medium term goal to deliver self-sustaining levels of cash generation.

Brian Tenner
Chief Operating Officer and Chief Financial Officer
16 October 2018

Forward-looking statements

The disclosures in these Preliminary Results for Nanoco Group plc (the "Company") and its subsidiaries ("Nanoco" or the "Group") contain certain forward-looking statements. Although the Board believes that the expectations reflected in these forward-looking statements are reasonable, it can give no assurance that these expectations will arise. Because the expectations are subject to risks and uncertainties, actual results may vary significantly from those expressed or implied by the forward-looking statements based upon a number of factors. Such forward-looking statements include the statements under "outlook", prospects and the commercial success of our CFQD[®] applications and other existing or future revenue-generating sources, risks related to the Group's ability or that of its sub-contractors and partners to manufacture products on a large scale or at all, risks related to the Group's and its marketing partners' ability to market products on a large scale or expand market share in the face of changes in customer requirements, competition and regulatory and technological change, risks related to the ownership and use of intellectual property, and risks related to the Group's ability to manage growth. Nanoco undertakes no obligation to revise or update any forward-looking statement to reflect events or circumstances after the date of the Preliminary Results.

Directors' responsibility statement

In accordance with the FCA's Disclosure and Transparency Rules, the Directors listed on the Company's website (www.nanocotechnologies.com/about-us/board-directors) confirm, to the best of their knowledge, that:

1. the preliminary results have been prepared in accordance with IFRS as adopted by the European Union and give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and Company and the undertakings included in the consolidation taken as a whole; and
2. the foregoing reviews and statements, includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties faced by the Group.

By order of the Board

Brian Tenner
Chief Operating Officer and Chief Financial Officer
16 October 2018

Consolidated statement of comprehensive income

for the year ended 31 July 2018

	Notes	2018 £'000	2017 £'000
Revenue	4	3,315	1,326
Cost of sales		(432)	(257)
Gross profit		2,883	1,069
Other operating income	5	136	281
Operating expenses			
Research and development expenses		(3,960)	(5,508)
Administrative expenses		(6,468)	(6,784)
Operating loss	6	(7,409)	(10,942)
- before share-based payments		(7,152)	(10,700)
- share-based payments	22	(257)	(242)
Finance income	8	11	44
Finance expense	8	(7)	—
Loss before taxation		(7,405)	(10,898)
Taxation	9	1,400	1,788
Loss after taxation		(6,005)	(9,110)
Other comprehensive income			
Loss on exchange rate translations		(13)	—
Loss after taxation for the year and total comprehensive loss for the year		(6,018)	(9,110)
Loss per share			
Basic and diluted loss for the year	10	(2.21)p	(3.82)p

The loss for the current and preceding year arises from the Group's continuing operations and is attributable to the equity holders of the Parent.

The basic and diluted loss per share are the same as the effect of share options is anti-dilutive.

Consolidated statement of changes in equity

for the year ended 31 July 2018

Group	Issued equity capital £'000	Share-based payment reserve £'000	Merger reserve £'000	Retained earnings £'000	Total £'000
At 31 July 2016	58,057	2,715	(1,242)	(40,767)	18,763
Loss for the year and total comprehensive loss for the year	—	—	—	(9,110)	(9,110)
Issue of share capital on exercise of options (note 21)	552	—	—	—	552
Share-based payments	—	242	—	—	242
At 31 July 2017	58,609	2,957	(1,242)	(49,877)	10,447
Loss for the year	—	—	—	(6,005)	(6,005)
Other comprehensive income	—	—	—	(13)	(13)
Total comprehensive loss	—	—	—	(6,018)	(6,018)
Issue of share capital on placing (note 21)	8,578	—	—	—	8,578
Costs of placing	(629)	—	—	—	(629)
Share-based payments	—	257	—	—	257
At 31 July 2018	66,558	3,214	(1,242)	(55,895)	12,635

Company statement of changes in equity

for the year ended 31 July 2018

Company	Issued equity capital £'000	Share-based payment reserve £'000	Capital redemption reserve £'000	Retained earnings £'000	Total £'000
At 31 July 2016	135,925	2,715	4,402	(25,125)	117,917
Profit for the year and total comprehensive profit for the year	—	—	—	30	30
Issue of share capital on exercise of options (note 21)	552	—	—	—	552
Share-based payments	—	242	—	—	242
At 31 July 2017	136,477	2,957	4,402	(25,095)	118,741
Loss for the year and total comprehensive profit for the year	—	—	—	(50,025)	(50,025)
Issue of share capital on placing (note 21)	8,578	—	—	—	8,578
Costs of placing	(629)	—	—	—	(629)
Share-based payments	—	257	—	—	257
At 31 July 2018	144,426	3,214	4,402	(75,120)	76,922

Statement of financial position

at 31 July 2018

Registered no. 05067291

	Notes	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Assets					
Non-current assets					
Tangible fixed assets	11	2,604	—	865	—
Intangible assets	12	3,432	—	2,619	—
Investment in subsidiaries	14	—	66,821	—	66,564
		6,036	66,821	3,484	66,564
Current assets					
Inventories	15	217	—	188	—
Trade and other receivables	16	1,415	10,508	669	47,957
Income tax asset		1,400	—	1,837	—
Cash and cash equivalents	17	10,729	43	5,706	4,670
		13,761	10,551	8,400	52,627
Assets held for sale	13	—	—	535	—
Total assets		19,797	77,372	12,419	119,191
Liabilities					
Current liabilities					
Trade and other payables	18	3,020	—	1,318	—
Deferred revenue	20	400	—	102	—
		3,420	—	1,420	—
Non-current liabilities					
Financial liabilities	19	407	450	—	450
Deferred revenue	20	3,335	—	552	—
		3,742	450	552	450
Total liabilities		7,162	450	1,972	450
Net assets		12,635	76,922	10,447	118,741
Capital and reserves					
Issued equity capital	21	66,558	144,426	58,609	136,477
Share-based payment reserve	22	3,214	3,214	2,957	2,957
Merger reserve	23	(1,242)	—	(1,242)	—
Capital redemption reserve	23	—	4,402	—	4,402
Retained earnings	24	(55,895)	(75,120)	(49,877)	(25,095)
Total equity		12,635	76,922	10,447	118,741

The Parent Company's result for the period ended 31 July 2018 was a loss of £50,025,000 (2017: profit of £30,000). There were no other recognised gains or losses in either the current or prior year.

Dr Michael Edelman

Director

16 October 2018

Mr Brian Tenner

Director

16 October 2018

Cash flow statements

for the year ended 31 July 2018

	Notes	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
(Loss)/profit before tax		(7,405)	(50,025)	(10,898)	30
Adjustments for:					
Net finance income	8	(4)	—	(44)	(30)
Loss on exchange rate translations		(13)	—	—	—
Depreciation of tangible fixed assets	11	504	—	741	—
Amortisation of intangible assets	12	476	—	482	—
Impairment of inter-company receivable	16	—	50,000	—	—
Share-based payments	22	257	—	242	—
Changes in working capital:					
(Increase)/decrease in inventories		(29)	—	20	—
(Increase)/decrease in trade and other receivables		(746)	—	1,365	—
Increase/(decrease) in trade and other payables		1,702	—	(1,125)	—
Increase/(decrease) in deferred revenue	20	3,081	—	(525)	—
Cash outflow from operating activities		(2,177)	(25)	(9,742)	—
Research and development tax credit received		1,837	—	2,000	—
Overseas corporation tax paid		—	—	(79)	—
Net cash outflow from operating activities		(340)	(25)	(7,821)	—
Cash flow from investing activities					
Purchases of tangible fixed assets	11	(2,215)	—	(374)	—
Purchases of intangible fixed assets	12	(782)	—	(1,185)	—
Inter-company loans to a subsidiary		—	(12,551)	—	(4,980)
Decrease in cash placed on deposit	17	—	—	5,000	5,000
Interest received		11	—	55	41
Net cash (outflow)/inflow from investing activities		(2,986)	(12,551)	3,496	61
Cash flow from financing activities					
Proceeds from placing of ordinary share capital		8,578	8,578	552	552
Costs of placing		(629)	(629)	—	—
Issue of convertible loan note	19	400	—	—	—
Loan repayment		—	—	(32)	—
Net cash inflow from financing activities		8,349	7,949	520	552
Increase/(decrease) in cash and cash equivalents		5,023	(4,627)	(3,805)	613
Cash and cash equivalents at the start of the year		5,706	4,670	9,511	4,057
Cash and cash equivalents at the end of the year	17	10,729	43	5,706	4,670

Notes to the preliminary results

1. Reporting entity

Nanoco Group plc ("the Company"), a public company limited by shares, is on the premium list of the London Stock Exchange. The Company is incorporated and domiciled in England, UK. The registered number is 05067291 and the address of its registered office is 46 Grafton Street, Manchester M13 9NT.

These Group preliminary results consolidate those of the Company and its subsidiaries (together referred to as "the Group" and individually as "Group entities") for the year ended 31 July 2018.

The preliminary results of Nanoco Group plc and its subsidiaries (the "Group") for the year ended 31 July 2018 were authorised for issue by the Board of Directors on 16 October 2018 and the statements of financial position were signed on the Board's behalf by Dr Michael Edelman and Mr Brian Tenner.

The preliminary results do not constitute statutory financial statements within the meaning of section 435 of the Companies Act 2006. A copy of the statutory financial statements for the year ended 31 July 2017 has been delivered to the Registrar of Companies. The Auditors' opinion on those financial statements was unqualified, did not draw attention to any matters by way of an emphasis of matter paragraph, and it contained no statement under section 498(2) or section 498(3) of the Companies Act 2006.

The statutory financial statements for the year ended 31 July 2018 will be delivered to the registrar of companies as soon as practicable. The auditors have reported on those financial statements and included an emphasis of matter in respect of a material uncertainty relating to going concern. There were no statements under section 498(2) or section 498(3) of the Companies Act 2006.

The Company has elected to take the exemption under section 408 of the Companies Act 2006 not to present the Parent Company's income statement.

The significant accounting policies adopted by the Group are set out in note 3.

2. Basis of preparation

(a) Statement of compliance

The Group's and Parent Company's preliminary results have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union ("IFRS") and IFRS Interpretations Committee ("IFRSIC") interpretations as they apply to the preliminary results of the Group for the year ended 31 July 2018.

(b) Basis of measurement

The Parent Company and Group preliminary results have been prepared on the historical cost basis. There were no assets or liabilities that were measured at fair value at 31 July 2018.

(c) Going concern

All of the following matters are taken into account by the Directors in forming their assessment of going concern. The Group's business activities and market conditions, the principal risks and uncertainties and the Group's financial position are described in the Financial Review. Furthermore, note 26 summarises the Group's financial risk management objectives, policies and processes. The Group funds its day-to-day cash requirements from existing cash reserves (as is common with businesses at a similar stage of development, the Group does not currently have access to any debt facilities).

For the purposes of their going concern assessment and the basis for the preparation of the 2018 Annual Report, the Directors have reviewed the same trading and cash flow forecasts and sensitivity analyses that were used by the Group in the Viability Assessment noted earlier in this report. The same base case and downside sensitivities were also used.

The base case represents the Board's current expectations. The key assumptions underpinning the base case are:

- Commercial production levels of nano-materials from Runcorn do not commence until the second half of calendar year 2019 (that is, the financial year ending July 2020);
- Cash generating revenue from display, lighting and other business lines is limited to contractual amounts already agreed in royalty and licence agreements and in grant awards. While the Group continues discussions with a number of potential display customers, in the interests of being conservative none are assumed to come to fruition during the forecast period;
- Revenue generating milestones already under contract are assumed to be achieved as good progress has already been made on these. In addition, new research service income is assumed to be generated based on active discussions and some additional new milestones under negotiation; and

- The Group's variable costs grow in line with manufacturing activities while the fixed overhead base is held broadly flat on 2018.

The base case produces a cash flow forecast that demonstrates that the Group has sufficient cash throughout the period of the forecast. The Group also has a medium term goal to achieve self-sustaining levels of cash flows.

However, the Board acknowledges that there is a risk that some or all of these non-contracted projects may not convert to sales during the forecast period. Accordingly, the Board has identified a downside scenario in which no revenue, except that already under contract, is achieved during the period. This was considered in addition to the base case in assessing the going concern status of the business. The downside scenario could arise from a number of possible causes which include, but are not limited to, changes in key customers' supply chains, the replacement of the Group as a supplier of nano-materials, the expansion of the Runcorn facility falling short of its design specifications or the failure of our materials to meet customers' technical specifications.

In the downside scenario, the Group's cash resources would run out in the third quarter of calendar year 2019 if no action to reduce current costs is taken. Management has identified a series of mitigating actions, including cost savings and a reorganisation of its operations that could be undertaken in the event cash generating revenues do not materialise. In this scenario the Group would enact its cost reduction plans in the current financial year ending 31 July 2019 with the objective of protecting the new Runcorn facility while reducing other manufacturing capabilities and indirect overheads. Management would aim to put in place sub-contract manufacturing agreements to satisfy future demand with a focus on existing licensees. While management has identified a number of cost savings, we recognise that our ability to deliver them in an appropriate timely manner could be constrained by other business activities.

IAS 1 Presentation of Financial Statements requires the Directors to disclose "material uncertainties related to events or conditions that may cast significant doubt upon the Group's ability to continue as a going concern". The Directors consider that the uncertainty regarding the Group's ability to implement cost savings in the downside case in the necessary timeframe meet the definition of a "material uncertainty". Nevertheless, considering the mitigating actions that can be made and after making enquiries and considering the uncertainties described above, the Directors have a reasonable expectation that the Company has access to adequate resources to continue in operational existence for the foreseeable future. Accordingly they continue to adopt the going concern basis in preparing the consolidated preliminary results. The preliminary results do not reflect any adjustments that would be required to be made if they were prepared on a basis other than the going concern basis.

(d) Functional and presentational currency

These preliminary results are presented in Pounds Sterling, which is the presentational currency of the Group and the functional currency of the Company. All financial information presented has been rounded to the nearest thousand.

(e) Use of estimates and judgements

The preparation of preliminary results requires management to make estimates and judgements that affect the amounts reported for assets and liabilities as at the reporting date and the amounts reported for revenues and expenses during the year. The nature of estimation means that actual amounts could differ from those estimates. Estimates and judgements used in the preparation of the preliminary results are continually reviewed and revised as necessary. While every effort is made to ensure that such estimates and judgements are reasonable, by their nature they are uncertain and, as such, changes in estimates and judgements may have a material impact on the preliminary results.

In the process of applying the Group's accounting policies, management has made the following estimates and judgements, which have the most significant effect on the amounts recognised in the consolidated preliminary results.

Estimates

Equity-settled share-based payments

The determination of share-based payment costs requires: the selection of an appropriate valuation method; consideration as to the inputs necessary for the valuation model chosen; and judgement regarding when and if performance conditions will be met. Inputs required for this arise from judgements relating to the future volatility of the share price of Nanoco and comparable companies, the Company's expected dividend yields, risk-free interest rates and expected lives of the options. The Directors draw on a variety of sources to aid in the determination of the appropriate data to use in such calculations. The share-based payment expense is most sensitive to vesting assumptions (below) and to the future volatility of the future share price factor. Further information is included in note 3.

Impairment of intellectual property and tangible fixed assets

As the Group has not, to date, made a profit the carrying value of these assets may need to be impaired. Impairment exists where the carrying value of an asset exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The value in use calculation uses cash flows based on

budgets that have been approved by the Directors. The Directors also use available information to assess whether the fair value less costs of disposal of the Group's non-current assets, including intellectual property, is less than their carrying amount. Furthermore, during the year another extensive review was undertaken to identify which patents are of no further value to Nanoco and should be allowed to lapse. As a consequence, patents with a value of £nil (2017: £77,000) have been fully impaired in these preliminary results. Judgements are based on the information available at each reporting date, which includes the progress with testing and certification and progress on, for example, establishment of commercial arrangements with third parties. The Group does not believe that any of its patents in isolation are material to the business. Management has adopted the prudent approach of amortising patent registration costs over a ten-year period, which is substantially shorter than the life of the patent. For external patents acquired the same rule is adopted unless the remaining life of the patent is shorter, in which event the cost of acquisition is amortised over the remaining life of the patent.

Impairment of investment and inter-company receivable

Judgement is required to assess the carrying value of the investment and inter-company receivable at each reporting date. Following the assessment of the carrying value of IP within the investment, and the likely repayment of the receivable by reference to discounted cash flow forecasts, management has concluded that the short term loan of the Company to its primary trading subsidiary, Nanoco Technologies Limited, is now impaired with the carrying value impaired by £50 million (2017: £nil). The quantum of this provision will be reviewed at each reporting date.

Taxation

Management judgement is required to determine the amount of tax assets that can be recognised, based upon the likely timing and level of future taxable profits together with an assessment of the effect of future tax planning strategies. Further information is included in note 9.

Judgements

Research and development

Careful judgement by the Directors is applied when deciding whether the recognition requirements for development costs have been met. This is necessary as the economic success of any product development is uncertain until such time as technical viability has been proven and commercial supply agreements are likely to be achieved. Judgements are based on the information available at each reporting date which includes the progress with testing and certification and progress on, for example, establishment of commercial arrangements with third parties. In addition, all internal activities related to research and development of new products are continuously monitored by the Directors. Further information is included in note 3.

Revenue recognition

Judgement is required in reviewing the terms of development agreements to identify separate components of revenue, if any, that are consistent with the economic substance of the agreement and in turn the period over which development revenue should be recognised. Judgements are required to assess the stage of completion including, as appropriate, whether and when contractual milestones have been achieved. Management judgements are similarly required to determine whether services or rights under licence agreements have been delivered so as to enable licence revenue to be recognised. This matter is further complicated where a contract may have different elements which may result in separate recognition treatments under IFRS 15. Further information is included in note 3(d).

Assets held for sale

Judgements are required as to whether assets are still required within the business and, if not, whether they have a realisable value outwith the Group. This is particularly pertinent if a particular line of research and development is not likely to be commercialised by the Group. If such assets are identified they are separately identified within the preliminary results.

Outlook

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, which have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are those relating to the estimation of the number of share options that will ultimately vest (note 22). The Group based its assumptions and estimates on parameters available when the consolidated preliminary results were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

3. Significant accounting policies

The accounting policies set out below are consistent with those of the previous financial year and are applied consistently by Group entities.

(a) Basis of consolidation

The Group preliminary results consolidate the preliminary results of Nanoco Group plc and the entities it controls (its subsidiaries) drawn up to 31 July each year.

Subsidiaries are all entities over which the Group has the power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee), exposure, or rights, to variable returns from its involvement with the investee and ability to use its power over the investee to affect its returns. All Nanoco Group plc's subsidiaries are 100% owned. Subsidiaries are fully consolidated from the date control passes.

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group. The costs of an acquisition are measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are initially measured at fair value at acquisition date irrespective of the extent of any minority interest. The difference between the cost of acquisition of shares in subsidiaries and the fair value of the identifiable net assets acquired is capitalised as goodwill and reviewed annually for impairment. Any deficiency in the cost of acquisition below the fair value of identifiable net assets acquired (i.e. discount on acquisition) is recognised directly in the consolidated statement of comprehensive income.

In the consolidated preliminary results, the assets and liabilities of the foreign operations are translated into sterling at the exchange rate prevailing at the reporting date. Income and cash flow statement items for Group entities with a functional currency other than Sterling are translated into Sterling at monthly average exchange rates, which approximate to the actual rates, for the relevant accounting periods. The exchange differences arising on translation are recognised in other comprehensive income. See note 3(b).

All intra-group transactions, balances and unrealised gains on transactions between Group companies are eliminated on consolidation. Subsidiaries' accounting policies are amended where necessary to ensure consistency with the policies adopted by the Group.

(b) Foreign currency transactions

Transactions in foreign currencies are initially recorded in the functional currency by applying the spot rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies (including those of the Group's US subsidiary) are retranslated at the functional currency rate of exchange ruling at the reporting date. All differences are taken to the consolidated statement of comprehensive income.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

(c) Segmental reporting

An operating segment is a component of an entity that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. As at the reporting date the Company operated with only a single segment, being the research, development and manufacture of products and services based on high performance nanoparticles.

(d) Revenue recognition

Revenue is recognised to the extent that it is probable that economic benefits will flow to the Group and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable for the sale of goods or services, excluding discounts, rebates, VAT and other sales taxes or duties.

The Group's revenues to date comprise amounts earned under joint development agreements, individual project development programmes and material supply and licence agreements and revenue from the sale of quantum dot products.

Revenues received in advance of work performed from development programmes are recognised on a straight-line basis over the period that the development work is being performed as measured by contractual milestones. Revenue is not recognised where there is uncertainty regarding the achievement of such milestones and where the customer has the right to recoup advance payments.

Cash advances from customers for the funding of capital equipment are accounted for in accordance with IFRIC 18: Transfer of assets from Customers where the Company retains control over the related assets. The advances are taken to deferred revenue where they are expected to be repaid as a proportion of future revenue under the contract.

Contractual payments received from licence agreements are recognised as revenue when goods, services or rights and entitlements are supplied. Upfront licence fees, where control over the intellectual property has been retained by the Group, are taken to income on a straight-line basis over the initial period of the contract in accordance with the continuing obligations under the contract.

Revenue from the sale of products is recognised at the point of transfer of risks and rewards of ownership, which is generally on shipment of product.

(e) Government grants

Government grants are recognised when it is reasonable to expect that the grants will be received and that all related conditions are met, usually on submission of a valid claim for payment.

Government grants of a revenue nature are recognised as other operating income in the consolidated statement of comprehensive income.

Government grants relating to capital expenditure are deducted in arriving at the carrying amount of the asset.

(f) Cost of sales

Cost of sales comprises the labour, materials and power costs incurred in the generation of revenue from products sold and the rendering of services.

Revenue from royalties and licences, which comprise payments from customers to gain preferential treatment in terms of supply or pricing, do not have an associated cost of sale.

(g) Operating loss

Operating losses are stated after research and development and administration expenses but before finance charges and taxation.

(h) Research and development

Research costs are charged in the consolidated statement of comprehensive income as they are incurred. Development costs will be capitalised as intangible assets when it is probable that future economic benefits will flow to the Group. Such intangible assets will be amortised on a straight-line basis from the point at which the assets are ready for use over the period of the expected benefit, and will be reviewed for impairment at each reporting date based on the circumstances at the reporting date.

The criteria for recognising expenditure as an asset are:

- it is technically feasible to complete the product;
- management intends to complete the product and use or sell it;
- there is an ability to use or sell the product;
- it can be demonstrated how the product will generate probable future economic benefits;
- adequate technical, financial and other resources are available to complete the development, use and sale of the product; and
- expenditure attributable to the product can be reliably measured.

Development costs are currently charged against income as incurred since the criteria for their recognition as an asset are not met, the exception being the costs of filing and maintenance of intellectual property as these are considered to generate probable future economic benefits and are capitalised as intangible assets (see note 12).

(i) Lease payments

Rentals payable under operating leases, which are leases where the lessor retains a significant proportion of the risks and rewards of the underlying asset, are charged in the consolidated statement of comprehensive income on a straight-line basis over the expected lease term.

Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

(j) Finance income and expense

Finance income comprises interest income on funds invested and changes in the fair value of financial assets at fair value through the consolidated statement of comprehensive income. Interest income is recognised as interest accrues using the effective interest rate method.

Finance expense comprises interest expense on borrowings. All borrowing costs are recognised using the effective interest method.

(k) Income tax

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the consolidated statement of comprehensive income except to the extent that it relates to items recognised directly in equity or in other comprehensive income.

Current income tax assets (including research and development income tax credit) and liabilities for the current and prior periods are measured at the amount expected to be recovered from, or paid to, the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the reporting date.

Deferred income tax is recognised on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the preliminary results with the following exceptions:

- where the temporary difference arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss; and

- in respect of taxable temporary differences associated with investments in subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are measured on an undiscounted basis using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date and which are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred income tax assets are recognised to the extent that it is probable that future taxable profits will be available against which differences can be utilised. An asset is not recognised to the extent that the transfer of economic benefits in the future is uncertain.

Deferred income tax assets and liabilities are offset only if a legally enforceable right exists to set off current tax assets against current tax liabilities, the deferred income taxes relate to the same taxation authority and that authority permits the Group to make a single payment.

(l) Property, plant and equipment

Property, plant and equipment assets are recognised initially at cost. After initial recognition, these assets are carried at cost less any accumulated depreciation and any accumulated impairment losses. Cost comprises the aggregate amount paid and the fair value of any other consideration given to acquire the asset and includes costs directly attributable to making the asset capable of operating as intended.

Depreciation is computed by allocating the depreciable amount of an asset on a systematic basis over its useful life and is applied separately to each identifiable component.

The following bases and rates are used to depreciate classes of assets:

Laboratory infrastructure	–	straight line over remainder of lease period (two to ten years)
Fixtures and fittings	–	straight line over five years
Office equipment	–	straight line over three years
Plant and machinery	–	straight line over five years

The carrying values of tangible fixed assets are reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable, and are written down immediately to their recoverable amount. Useful lives and residual values are reviewed annually and where adjustments are required these are made prospectively.

A tangible fixed asset item is derecognised on disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the derecognition of the asset is included in the consolidated statement of comprehensive income in the period of derecognition.

(m) Intangible assets

Intangible assets acquired either as part of a business combination or from contractual or other legal rights are recognised separately from goodwill provided they are separable and their fair value can be measured reliably. This includes the costs associated with acquiring and registering patents in respect of intellectual property rights.

Where consideration for the purchase of an intangible asset includes contingent consideration, the fair value of the contingent consideration is included in the cost of the asset.

Where intangible assets recognised have finite lives, after initial recognition their carrying value is amortised on a straight-line basis over those lives. The nature of those intangibles recognised and their estimated useful lives are as follows:

Patents	–	straight line over ten years
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(n) Impairment of assets

At each reporting date the Group reviews the carrying value of its plant, equipment and intangible assets to determine whether there is an indication that these assets have suffered an impairment loss. If any such indication exists, or when annual impairment testing for an asset is required, the Company makes an assessment of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying value of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, an appropriate valuation model is used and these calculations are corroborated by valuation multiples or other available fair value indicators. Impairment losses on continuing operations are recognised in the consolidated statement of comprehensive income in those expense categories consistent with the function of the impaired asset.

An assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the consolidated statement of comprehensive income unless the asset is carried at a revalued amount, in which case the reversal is treated as a valuation increase. After such a reversal the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

The carrying values of plant and equipment as at the reporting date have not been subjected to impairment charges.

After an extensive review during the current year no patents were identified that required further impairment. An impairment loss in the previous year in respect of intangible fixed assets is described in note 12.

(o) Assets held for sale

Non-current assets are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction, rather than through continuing use. They are measured at the lower of carrying amount and fair value less costs to sell, which are incremental costs directly attributable to the disposal of the asset. The carrying value is assessed at each reporting period.

Property, plant and equipment and intangible assets are not amortised once classified as held for sale. Assets classified as held for sale are presented separately as current assets in the statement of financial position.

(p) Investments in subsidiaries

Investments in subsidiaries are stated in the Company statement of financial position at cost less provision for any impairment.

(q) Inventories

Inventories are stated at the lower of cost and net realisable value. Cost based on latest contractual prices includes all costs incurred in bringing each product to its present location and condition. Net realisable value is based on estimated selling price less any further costs expected to be incurred to disposal. Provision is made for slow-moving or obsolete items.

(r) Financial instruments

Financial assets and financial liabilities are recognised when the Group becomes party to the contractual provisions of the relevant instrument and derecognised when it ceases to be party to such provisions. Such assets and liabilities are classified as current if they are expected to be realised or settled within twelve months after the balance sheet date. Financial assets and liabilities are initially recognised at fair value and subsequently measured at either fair value or amortised cost including directly attributable transaction costs.

The Group has the following categories of financial assets and liabilities:

Loans and receivables

(i) Trade and other receivables

Trade receivables, which generally have 30 to 60-day terms, are recognised and carried at the lower of their original invoiced value and recoverable amount. The time value of money is not material.

Provision is made when there is objective evidence that the Group will not be able to recover balances in full. Significant financial difficulties faced by the customer, probability that the customer will enter bankruptcy or financial reorganisation and default in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. The carrying value of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in the consolidated statement of comprehensive income within administrative expenses.

When a trade receivable is uncollectable, it is written off against the allowance account for trade receivables.

(ii) Cash, cash equivalents and short-term investments

Cash and cash equivalents comprise cash at hand and deposits with maturities of three months or less. Short-term investments comprise deposits with maturities of more than three months, but no greater than twelve months.

Financial liabilities at amortised cost

(i) Trade and other payables

Trade and other payables are non-interest bearing and are initially recognised at fair value. They are subsequently measured at amortised cost using the effective interest rate method.

(ii) **Loans and Convertible loan notes**

Obligations for loans and borrowings are measured initially at fair value and subsequently interest-bearing loans are measured at fair value. Convertible loan notes are presented as financial liabilities as rights of the note holder to convert the loan notes into equity are within the control of the Company.

(s) Share capital

Proceeds on issue of shares are included in shareholders' equity, net of transaction costs. The carrying amount is not re-measured in subsequent years.

(t) Shares held by the Employee Benefit Trust ("EBT")

Following the exercise on 2 August 2016 upon which jointly owned shares were transferred to the sole beneficiary, there are no further shares held in the EBT. Administration of the Trust has been maintained during the current period.

(u) Share-based payments

Equity-settled share-based payment transactions are measured with reference to the fair value at the date of grant, recognised on a straight-line basis over the vesting period, based on the Company's estimate of shares that will eventually vest. Fair value is measured using a suitable option pricing model.

At each reporting date before vesting, the cumulative expense is calculated, representing the extent to which the vesting period has expired and management's best estimate of the achievement or otherwise of non-market conditions and the number of equity instruments that will ultimately vest. The movement in cumulative expense since the previous reporting date is recognised in the consolidated statement of comprehensive income, with a corresponding entry in equity.

Where the terms of an equity-settled award are modified or a new award is designated as replacing a cancelled or settled award, the cost based on the original award terms continues to be recognised over the original vesting period. In addition, an expense is recognised over the remainder of the new vesting period for the incremental fair value of any modification, based on the difference between the fair value of the original award and the fair value of the modified award, both as measured on the date of the modification. No reduction is recognised if this difference is negative.

Where awards are granted to the employees of the subsidiary company, the fair value of the awards at grant date is recorded in the Company's preliminary results as an increase in the value of the investment with a corresponding increase in equity via the share-based payment reserve.

(v) Defined contribution pension scheme

The Group operates a defined contribution pension scheme. The assets of the scheme are held separately from those of the Company in an independently administered fund. The amounts charged against profits represent the contributions payable to the scheme in respect of the accounting period.

(w) New accounting standards and interpretations

The following amendments to IFRS became mandatory in this reporting period. The Group has applied the following standards and amendments for the first time for the reporting period commencing 1 August 2017:

- Disclosure initiative – amendments to IAS 7 Statement of Cash Flows;
- Amendments to IAS 12: Recognition of Deferred Tax Assets for unrelieved losses.

The adoption of these amendments did not have an impact on the current period or any prior period.

New standards not yet adopted

The IASB has published three new accounting standards relevant to the Group that will be mandatory in future periods. These standards have not been early adopted in these consolidated preliminary results. The Group's initial assessment of the future impact of these new standards is as follows:

IFRS 9 Financial Instruments (effective for annual periods beginning on or after 1 January 2018)

The Group will adopt the new standard on 1 August 2018 and will not restate comparative information. Following the assessment of the impact of the standard, based on currently available information, the impairment requirements of IFRS 9, which require the Group to record expected credit losses on debt securities, loans and trade receivables on either a 12 month or lifetime basis, are likely to lead to an increase in the loss allowance.

The Group does not expect that the classification and measurement requirements of IFRS 9, in the context of the simplicity of the group's financial instruments, will lead to a significant impact on the group balance sheet or on its equity.

IFRS 15 Revenue from Contracts with Customers (effective for annual periods beginning on or after 1 January 2018)

The new revenue standard provides a five-step model for revenue recognition and disclosure in a framework that is designed to improve comparability of revenue amounts over a range of industries, companies and geographical boundaries. The standard can significantly change an issuer's timing of recognition of revenue, among other changes and is effective for Nanoco in the year ending 31 July 2019.

IFRS 15 requires the identification of deliverables in contracts with customers that qualify as performance obligations. The transaction price receivable from customers must be allocated between the Company's performance obligations under contracts on a relative stand-alone basis. Where goods or services sold together are concluded to be distinct performance obligations, revenue allocated to such goods or services is recognised when the control of goods passes to the customer or as the service is delivered.

Detailed reviews of revenue arrangements are under way and will continue into 2018/19 as we finalise our assessment of the impact of the new standard. Key matters arising from the assessment relate to the identification of performance obligations and determining when they are satisfied.

Based on work to date we expect that one contract will be impacted by IFRS 15 in that an upfront licence fee, currently recognised over the life of the agreement (seven and a half years) under IAS 18, will be recognised over time, based on the number of units of product sold under IFRS 15 thereby deferring revenues and profits recognised under IAS 18 in the early years of the agreement.

We continue to assess the impact of the introduction of IFRS 15 on how we measure revenue for services performed under the major contract signed during the year with our US customer.

When IFRS 15 is adopted, it can be applied either on a fully retrospective basis, requiring the restatement of the comparative periods presented in the preliminary results, or with the cumulative retrospective impact of IFRS 15 applied as an adjustment to equity on the date of adoption. When the latter approach is applied it is necessary to disclose the impact of IFRS 15 on each line item in the preliminary results in the reporting period. A cumulative retrospective approach as modified in accordance with the standard is expected to be taken.

IFRS 16 Leases (effective for annual periods beginning on or after 1 January 2019)

The new leases standard changes the previous lease accounting model so a lessee will now reflect more assets and liabilities arising from leases on its balance sheet. This can substantially affect key financial ratios, including ratios related to debt covenants or debt-to-equity ratios.

The Group expects to recognise certain assets and liabilities (as outlined in note 25) on initial recognition of this standard, and it is expected to have an impact on the consolidated income statement and balance sheet. However, the Group only has a limited number of off-balance sheet leases classified as operating leases under current lease accounting requirements per IAS 17 Leases.

Amendments to IFRS 2 Classification and Measurement of Share-based Payment Transactions (effective for annual periods beginning on or after 1 January 2018)

The amendments are intended to eliminate diversity in practice, but are narrow in scope and address specific areas of classification and measurement. We do not anticipate the introduction of these amendments will have a material impact on our preliminary results.

4. Segmental information

Operating segments

At 31 July 2018 the Group operated as one segment, being the research, development and manufacture of products and services based on high performance nanoparticles. This is the level at which operating results are reviewed by the chief operating decision maker (i.e. the Chief Executive Officer) to make decisions about resources, and for which financial information is available. All revenues have been generated from continuing operations and are from external customers.

	31 July 2018 £'000	31 July 2017 £'000
Analysis of revenue		
Products sold	168	470
Rendering of services	3,000	241
Royalties and licences	147	615
	3,315	1,326

There was one material customer who generated revenue of £3,000,000 (2017: two material customers amounting to £832,000 and £150,000).

The Group operates in four main geographic areas, although all are managed in the UK. The Group's revenue per geographical segment based on the customer's location is as follows:

	31 July 2018 £'000	31 July 2017 £'000
Revenue		
UK	9	167
Europe (excluding UK)	42	843
Asia	176	163
USA	3,088	153

3,315 1,326

All the Group's assets are held in the UK and all of its capital expenditure arises in the UK. The loss before taxation and attributable to the single segment was £7,405,000 (2017: £10,898,000).

5. Other operating income

	31 July 2018 £'000	31 July 2017 £'000
Government grants	136	213
Other income – insurance proceeds	—	68
	136	281

6. Operating loss

	31 July 2018 £'000	31 July 2017 £'000
Operating loss is stated after charging:		
Depreciation of tangible fixed assets (see note 11)	504	741
Amortisation of intangible assets (see note 12)	476	405
Impairment of intangible assets (see note 12)	—	77
Staff costs (see note 7)	5,577	5,947
Foreign exchange losses	64	43
Research and development expense*	3,960	5,508
Share-based payments	257	242
Operating lease rentals (see note 25):		
Land and buildings	867	733

* Included within research and development expense are staff costs totalling £3,076,000 (2017: £4,011,000) also included in note 7.

Auditor's remuneration

Audit services:

– Fees payable to Company auditor for the audit of the Parent and the consolidated accounts	82	60
– Auditing the accounts of subsidiaries pursuant to legislation	58	30

Fees payable to Company auditor for other services:

– Assurance services in connection with the review of interim results	12	22
– Services relating to corporate finance transactions not covered above	25	30

Total auditor's remuneration	177	142
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7. Staff costs

	31 July 2018 £'000	31 July 2017 £'000
Wages and salaries	4,587	4,947
Social security costs	445	453
Pension contributions	288	305
Share-based payments	257	242
	5,577	5,947

Directors' remuneration (including benefits in kind) included in the aggregate remuneration above comprised:

Emoluments for qualifying services	1,015	1,071
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Directors' emoluments (excluding social security costs and long-term incentives, but including benefits in kind) disclosed above include £312,000 paid to the highest paid Director (2017: £327,000). Details of the compensation of key management personnel are described in note 28.

Pension contributions into money purchase pension schemes were made for four Directors (2017: four).

Aggregate gains made by Directors during the year following the exercise of share options and jointly owned EBT shares were £nil (2017: £nil).

Not included in the costs reported above are share awards to be made to Directors under the Deferred Bonus Plan amounting to £nil (2017: £nil) which are included in the Directors' remuneration report. The awards are recognised in the income statement by way of a share-based payment charge over the deferral period as required by IFRS 2.

An analysis of the highest paid Director's remuneration is included in the Directors' remuneration report.

The average number of employees during the year (including Directors) was as follows:

Group	31 July 2018 Number	31 July 2017 Number
Directors	7	8
Laboratory and administrative staff	79	102
	86	110

8. Finance income and expense

Group	31 July 2018 £'000	31 July 2017 £'000
Finance income		
Interest receivable	11	44
Finance expense		
Loan note interest	(7)	—
	4	44

9. Taxation

The tax credit is made up as follows:

Group	31 July 2018 £'000	31 July 2017 £'000
Current income tax		
Research and development income tax credit receivable	(1,400)	(1,837)
Adjustment in respect of prior years	—	(30)
Overseas corporation tax	—	79
	(1,400)	(1,788)
Deferred tax		
Charge for the year	—	—
Total income tax credit	(1,400)	(1,788)

The adjustments in respect of prior years relate to research and development income tax credits. The research and development income tax for the year ended 31 July 2017 was submitted in May 2018 and the repayment was received in June 2018. The income tax receivable shown in the statement of financial position is the R&D tax credit receivable reported above.

The tax assessed for the year varies from the standard rate of corporation tax as explained below:

Group	31 July 2018 £'000	31 July 2017 £'000
Loss before taxation	(7,405)	(10,898)
Tax at standard rate of 19% (2017: 19.67%)	(1,407)	(2,143)
Effects of:		
Expenses not deductible for tax purposes	3	24
Capital allowances in excess of depreciation	(62)	54
Additional deduction for research and development expenditure	(1,037)	(1,405)
Surrender of research and development relief for repayable tax credit	1,839	2,492
Research and development tax credit receivable	(1,400)	(1,837)
Share options exercised (CTA 2009 Pt 12 deduction)	—	(17)
Overseas corporation tax	—	79
Losses and share-based payment charges carried forward not recognised in deferred tax	669	995
Adjustment in respect of rate changes	(5)	—
Adjustment in respect of prior years	—	(30)
Tax credit in income statement	(1,400)	(1,788)

The Group has accumulated losses available to carry forward against future trading profits of £32.2 million (2017: £29.1 million).

Deferred tax liabilities/(assets) provided/(recognised) at a standard rate of 17% (2017: 17%) are as follows:

	31 July 2018 £'000	31 July 2017 £'000
Accelerated capital allowances	407	83
Tax losses	(407)	(83)
	—	—

The Group also has deferred tax assets, measured at a standard rate of 17% (2017: 17%), in respect of share-based payments of £23,000 (2017: £369,000) and tax losses of £5,486,000 (2017: £4,951,000) which have not been recognised as an asset as it is not yet probable that future taxable profits will be available against which the assets can be utilised.

10. Earnings per share

Group	31 July 2018 £'000	31 July 2017 £'000
Loss for the financial year attributable to equity shareholders	(6,005)	(9,110)
Share-based payments	257	242
Loss for the financial year before share-based payments	(5,748)	(8,868)
Weighted average number of shares		
Ordinary shares in issue	271,964,590	238,180,510
Adjusted loss per share before share-based payments (pence)	(2.11)	(3.72)
Basic loss per share (pence)	(2.21)	(3.82)

Diluted loss per share has not been presented above as the effect of share options issued is anti-dilutive.

11. Property, plant and equipment

Group	Assets under construction £'000	Laboratory infrastructure £'000	Office equipment, fixtures and fittings £'000	Plant and machinery £'000	Total £'000
Cost					
At 1 August 2016	—	2,645	256	4,748	7,649
Additions	—	10	139	225	374
Reclassified as assets held for sale (note 13)	—	—	—	(203)	(203)
At 31 July 2017	—	2,655	395	4,770	7,820
Additions	1,391	748	44	32	2,215
Reclassified from assets held for sale (note 13)	—	—	—	203	203
At 31 July 2018	1,391	3,403	439	5,005	10,238
Depreciation					
At 1 August 2016	—	2,401	208	3,780	6,389
Provided during the year	—	213	55	473	741
Reclassified as assets held for sale (note 13)	—	—	—	(175)	(175)
At 31 July 2017	—	2,614	263	4,078	6,955
Provided during the year	—	12	66	426	504
Reclassified from assets held for sale (note 13)	—	—	—	175	175
At 31 July 2018	—	2,626	329	4,679	7,634
Net book value					
At 31 July 2018	1,391	777	110	326	2,604
At 31 July 2017	—	41	132	692	865

The aggregate original cost of tangible assets now fully depreciated but considered to be still in use is £6,790,000 (2017: £5,081,000). Assets under construction (plant and machinery) relate to the expansion of our Runcorn facility and these assets will commence to be depreciated once the plant is fully commissioned.

12. Intangible assets

Group	Patents £'000
Cost	
At 1 August 2016	3,703
Additions	1,185
Reclassified as assets held for sale (note 13)	(597)
At 31 July 2017	4,291
Additions	782
Reclassified from assets held for sale (note 13)	597
At 31 July 2018	5,670
Amortisation	
At 1 August 2016	1,280
Provided during the year	405
Impairment charge	77
Reclassified as assets held for sale (note 13)	(90)
At 31 July 2017	1,672
Provided during the year	476
Impairment charge	—

Reclassified from assets held for sale (note 13)	90
At 31 July 2018	2,238
Net book value	
At 31 July 2018	3,432
At 31 July 2017	2,619

Contingent consideration of \$150,000 is payable in respect of a purchase of patents made during a previous period. The amount is payable if the Group reaches a revenue target in a future reporting period. The addition is recorded above at the Directors' estimate of fair value of the consideration payable.

Intangible assets are amortised on a straight-line basis over ten years. Amortisation provided during the period is recognised in administrative expenses. The Group does not believe that any of its patents in isolation are material to the business. The aggregate original cost of intangible assets now fully depreciated but considered to be still in use is £471,000 (2017: £161,000).

During the year an extensive review was undertaken to identify which patents are of no further value to Nanoco and should be allowed to lapse. No such patents were identified. As a consequence, patents with a value of £Nil (2017: £77,000) have been fully impaired in these preliminary results. The impairment charge is recognised within administrative expenses.

13. Assets held for sale

	Plant and machinery £'000	Intellectual property £'000	Total £'000
At 1 August 2017	28	507	535
Reclassified during the period	(28)	(507)	(535)
At 31 July 2018	—	—	—

At 31 July 2017 these assets represented those held for sale following the Board's decision to dispose of the equipment and intellectual property arising from the Group's studies on solar power generation using CIGS (copper indium gallium selenide) materials. The Directors considered that these assets would be disposed of within twelve months through a sale transaction. Upon reclassification no re-measurement was necessary and therefore there have been no gains or losses recognised. All of the assets are held by the one operating segment. However, during the current year the Board decided that the assets were of continuing value to the Group's activities and therefore they have been reclassified back to tangible and intangible assets as disclosed above. Additional amortisation of £30,000 and depreciation of £16,000 was charged to administrative expenses in the current period to account for the fact that such charges were not made during the time when the assets were held for sale.

14. Investment in subsidiaries

Company	Shares £'000	Loans £'000	Loan impairment £'000	Total £'000
At 1 August 2016	63,235	23,373	(20,286)	66,322
Increase in respect of share-based payments	—	242	—	242
At 31 July 2017	63,235	23,615	(20,286)	66,564
Increase in respect of share-based payments	—	257	—	257
At 31 July 2018	63,235	23,872	(20,286)	66,821

By subsidiary	Shares £'000	Loans £'000	Loan impairment £'000	Total £'000
Nanoco Tech Limited	63,235	—	—	63,235
Nanoco Life Sciences Limited	—	20,286	(20,286)	—
Nanoco Technologies Limited	—	3,586	—	3,586
At 31 July 2018	63,235	23,872	(20,286)	66,821

Loans to subsidiary undertakings carry no interest and are repayable on demand. Further information in relation to these loans is given in note 27.

Subsidiary undertakings	Country of incorporation	Principal activity	Share of issued ordinary share capital	
			31 July 2018	31 July 2017
Nanoco Life Sciences Limited	England and Wales	Research and development	100%	100%
Nanoco Tech Limited	England and Wales	Holding company	100%	100%
Nanoco Technologies Limited*	England and Wales	Manufacture and development of nanoparticles	100%	100%
Nanoco 2D Materials Limited	England and Wales	Research and development	100%	100%
Nanoco US Inc. **	USA	Management services	100%	100%

All subsidiaries incorporated in England and Wales are registered at 46 Grafton Street, Manchester M13 9NT. Nanoco US Inc. is registered at 33 Bradford Street, Concord, MA 01742.

With the exception of the two companies footnoted below all other shareholdings are owned by Nanoco Group plc.

* Share capital is owned by Nanoco Tech Limited.

** Nanoco US Inc. is a wholly owned subsidiary of Nanoco Tech Limited. It was formed in July 2013 primarily in order to provide the services of US-located staff to the rest of the Group.

15. Inventories

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Raw materials, finished goods and consumables	217	—	188	—

A total of £144,000 (2017: £80,000) was included in cost of sales with respect to the cost of inventory expensed during the year.

16. Trade and other receivables

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Trade receivables	290	—	111	—
Prepayments and accrued income	435	—	329	—
Inter-company short-term loan to subsidiary	—	60,508	—	47,957
Less impairment provision	—	(50,000)	—	—
Other receivables	690	—	229	—
	1,415	10,508	669	47,957

Following the assessment of the carrying value of IP within the investment, and the likely repayment of the receivable by reference to discounted cash flow forecasts, management has concluded that the short term loan of the Company to its primary trading subsidiary, Nanoco Technologies Limited, is now impaired with the carrying value impaired by £50 million (2017: £nil). The quantum of this provision will be reviewed at each reporting date.

Trade receivables are non-interest bearing and are generally due and paid within 30 to 60 days. The Directors consider that the carrying amount of trade and other receivables approximates to their fair value and that no impairment is required at the reporting date. Therefore there is no provision for impairment at the balance sheet date (2017: £nil).

Trade receivables are denominated in the following currency:

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
US Dollars	10	—	15	—
Euros	—	—	53	—
Sterling	280	—	43	—
	290	—	111	—

At 31 July the analysis of trade receivables that were past due but not impaired was as follows:

	Not yet due £'000	Due but not impaired £'000	Past due but not impaired >90 days £'000	Past due but not impaired 120 to 150 days £'000	Total £'000
2018	279	11	—	—	290
2017	105	6	—	—	111

17. Cash and cash equivalents

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
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Cash and cash equivalents	10,729	43	5,706	4,670
	10,729	43	5,706	4,670

At 31 July 2018, cash and cash equivalents include an amount of £840,000 received from a customer for the purchase of capital equipment. The cash cannot be used for any other purpose.

Under IAS 7, cash held on long-term deposits (being deposits with original maturity of greater than three months and no more than twelve months) that cannot readily be converted into cash must be classified as a short-term investment. There were no such deposits at 31 July 2018 (2017: same).

An analysis of cash, cash equivalents and deposits by denominated currency is given in note 26.

18. Trade and other payables

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Current				
Trade payables	2,016	—	814	—
Other payables	126	—	136	—
Accruals	878	—	368	—
	3,020	—	1,318	—

The Directors consider that the carrying amount of trade and other payables approximates to their fair value. The average credit period taken is 41 days (2017: 37 days).

19. Financial liabilities

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Non-current				
Long-term loan from subsidiary	—	450	—	450
Convertible Series A Loan note 2028	400	—	—	—
Accrued interest	7	—	—	—
	407	450	—	450

The loan note issued by Nanoco 2D Materials Limited is unsecured, bears a fixed interest at 6.5% pa and is fully repayable with accrued interest in 2028 unless options to convert into shares of that company have been exercised. The note holders have a right to convert the loan note into shares of the subsidiary in certain circumstances but these are within the control of the Company. Interest is not charged on inter-company loans (2017: no interest).

There have been no changes in liabilities arising from financing activities other than described in this note.

20. Deferred revenue

	31 July 2018 Group £'000	31 July 2018 Company £'000	31 July 2017 Group £'000	31 July 2017 Company £'000
Current				
Upfront licence fees	102	—	102	—
Milestone payments	298	—	—	—
	400	—	102	—
Non-current				
Upfront licence fees	450	—	552	—
Cash advanced from customers	2,885	—	—	—
	3,335	—	552	—
	3,735	—	654	—

Deferred revenue arises under IFRS where upfront licence fees are accounted for on a straight-line basis over the initial term of the contract or where performance criteria have not been satisfied in the accounting period.

Additionally, cash received in advance from customers is accounted for in accordance with IFRIC 18, where the advance may be repaid as a proportion of future revenue under the contract.

21. Issued equity capital

Group	Number	Share capital £'000	Share premium £'000	Reverse acquisition reserve £'000	Total £'000

Allotted, called up and fully paid ordinary shares					
At 31 July 2016	237,077,578	23,708	112,217	(77,868)	58,057
Shares issued on exercise of options	1,213,750	121	431	—	552
At 31 July 2017	238,291,328	23,829	112,648	(77,868)	58,609
Shares issued on placing	47,655,821	4,766	3,812	—	8,578
Costs of placing	—	—	(629)	—	(629)
At 31 July 2018	285,947,149	28,595	115,831	(77,868)	66,558

The balances classified as share capital and share premium include the total net proceeds (nominal value and share premium respectively) on issue of the Company's equity share capital, comprising ordinary shares.

The retained loss and other equity balances recognised in the Group preliminary results reflect the consolidated retained loss and other equity balances of Nanoco Tech Limited immediately before the business combination which was reported in the year ended 31 July 2009. The consolidated results for the period from 1 August 2008 to the date of the acquisition by the Company are those of Nanoco Tech Limited. However, the equity structure appearing in the Group preliminary results reflects the equity structure of the legal parent, including the equity instruments issued under the share-for-share exchange to effect the transaction. The effect of using the equity structure of the legal parent gives rise to an adjustment to the Group's issued equity capital in the form of a reverse acquisition reserve.

Shares issued on placing

On 15 December 2017, 47,655,821 shares were issued at 18 pence each.

Company	Number	Share capital £'000	Share premium £'000	Total £'000
Allotted, called up and fully paid ordinary shares of 10p				
At 31 July 2016	237,077,578	23,708	112,217	135,925
Shares issued on exercise of options	1,213,750	121	431	552
At 31 July 2017	238,291,328	23,829	112,648	136,477
Shares issued on placing	47,655,821	4,766	3,812	8,578
Costs of placing	—	—	(629)	(629)
At 31 July 2018	285,947,149	28,595	115,831	144,426

22. Share-based payment reserve

Group and Company	£'000
At 31 July 2016	2,715
Share-based payments	242
At 31 July 2017	2,957
Share-based payments	257
At 31 July 2018	3,214

The share-based payment reserve accumulates the corresponding credit entry in respect of share-based payment charges. Movements in the reserve are disclosed in the consolidated statement of changes in equity.

A charge of £257,000 has been recognised in the statement of comprehensive income for the year (2017: charge of £242,000).

Share option schemes

The Group operates the following share option schemes, all of which are operated as Enterprise Management Incentive ("EMI") schemes insofar as the share options being issued meet the EMI criteria as defined by HM Revenue & Customs. Share options issued that do not meet EMI criteria are issued as unapproved share options, but are subject to the same exercise performance conditions.

Nanoco Group plc Long Term Incentive Plan ("LTIP")

Grant in November 2011

Share options were granted to staff and Executive Directors on 25 November 2011. The options granted to Executive Directors were subject to commercial targets being achieved. The exercise price was set at 50 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. Share options issued to staff vest over a three-year period from the date of grant and are exercisable until the tenth anniversary of the award, but are not subject to performance conditions.

Grant in October 2012

Share options were granted to staff and Executive Directors on 22 October 2012. The options granted to Executive Directors were subject to commercial targets being achieved. The exercise price was set at 57 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit

is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. Share options issued to staff vest over a three-year period from the date of grant and are exercisable until the tenth anniversary of the award, but are not subject to performance conditions.

Grant in May 2014

Share options were granted to certain staff on 23 May 2014. The exercise price was set at 89 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of three years from the date of grant and are exercisable until the tenth anniversary of the award. The awards are not subject to performance conditions. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting. No options were granted to Executive Directors.

Grant in October 2014

Share options were granted to an Executive Director on 14 October 2014. The exercise price was set at 10 pence, being the nominal value of the share. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of three years from the date of grant and are exercisable until the tenth anniversary of the award. The awards are subject to performance conditions which were amended during the year so as to be in line with the 2015 LTIP scheme. As a result of the modification, the fair value of the award was reduced. However, in accordance with IFRS 2 no change was made to the charge in the preliminary results. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting.

Nanoco Group plc 2015 Long Term Incentive Plan ("LTIP")

Grant in December 2015

Following approval of the new scheme at the 2015 AGM, share options were granted to four Executive Directors at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of the three-year performance period subject to meeting the performance criteria and are exercisable after a two-year holding period until the tenth anniversary of the award.

Grant in April 2016

Share options were granted to an employee on 12 April 2016 at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of a three-year performance period subject to meeting performance criteria and are exercisable until the tenth anniversary of the award.

Grant in November 2016

Options were granted to the Executive Directors and all eligible staff on 22 November 2016 at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued and are subject to a two-year holding period. The options vest at the end of a three-year performance period subject to meeting performance criteria and are exercisable until the tenth anniversary of the award.

Grant in December 2017

Options were granted to the Executive Directors and certain eligible staff on 6 December 2017 at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued and are subject to a two-year holding period. The options vest at the end of a three-year performance period subject to meeting performance criteria and are exercisable until the tenth anniversary of the award.

Other awards

Share options are awarded to management and key staff as a mechanism for attracting and retaining key members of staff. The options are issued at either market price on the day preceding grant or, in the event of abnormal price movements, at an average market price for the week preceding grant date. On 14 October 2015, unapproved options were granted to a member of staff with an exercise price of 56.5 pence. These options vest over a three-year period from the date of grant with performance conditions and are exercisable until the tenth anniversary of the award. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting. The fair value benefit is measured using a binomial valuation model, taking into account the terms and conditions upon which the share options were issued.

Shares held in the Employee Benefit Trust ("EBT")

The Group operates a jointly owned EBT share scheme but currently no shares or options are held within the Trust.

The following tables illustrate the number and weighted average exercise prices of, and movements in, share options during the year.

Group and Company	2018 total Number	2017 total Number
Outstanding at 1 August	16,136,316	14,008,022

Granted during the year	3,787,608	4,158,821
Exercised during the year	—	(1,743,839)
Forfeited/cancelled/lapsed	(2,670,445)	(286,688)
Outstanding at 31 July	17,253,479	16,136,316
Exercisable at 31 July	10,076,620	9,784,814

Weighted average exercise price of options

Group and Company	2018 Pence	2017 Pence
Outstanding at 1 August	38.6	48.9
Granted during the year	—	—
Exercised during the year	—	31.7
Forfeited/cancelled	—	22.6
Outstanding at 31 July	35.9	38.6

The weighted average exercise price of options granted during the year to 31 July 2018 was nil (2017: nil). The range of exercise prices for options outstanding at the end of the year was nil–110 pence (2017: nil–110 pence).

For the share options outstanding as at 31 July 2018, the weighted average remaining contractual life is 6.0 years (2017: 6.4 years).

The following table lists the inputs to the models used for the years ended 31 July 2018 and 31 July 2017.

Group and Company	Market performance-linked grants		Non-market performance-linked grants	
	2018	2017	2018	2017
Expected volatility	62%	59%	62%	n/a
Risk-free interest rate	0.52%	0.26%	0.52%	n/a
Expected life of options (years average)	3	3	3	3
Weighted average exercise price	nil	nil	nil	nil
Weighted average share price at date of grant	26p	49p	26p	49p
Model used	Stochastic	Stochastic	Binomial	Binomial

The expected life of the options is based on historical data and is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility is indicative of future trends, which may also not necessarily be the actual outcome.

Certain awards are subject to a holding period after vesting. A Finnerty model has been used to determine a discount for the lack of marketability of the shares.

23. Merger reserve and capital redemption reserve

Merger reserve

Group	£'000
At 31 July 2016, 31 July 2017 and 31 July 2018	(1,242)

The merger reserve arises under section 612 of the Companies Act 2006 on the shares issued by Nanoco Tech Limited to acquire Nanoco Technologies Limited as part of a simple Group reorganisation on 27 June 2007.

Capital redemption reserve

Company	£'000
At 31 July 2016, 31 July 2017 and 31 July 2018	4,402

The capital redemption reserve arises from the off-market purchase of deferred shares on 4 May 2005 and their subsequent cancellation.

24. Movement in retained earnings

Group	Profit & loss £'000	Foreign currency translation reserve £'000	Treasury shares £'000	Total retained earnings £'000
At 31 July 2016	(40,670)	—	(97)	(40,767)
Loss for the year	(9,110)	—	—	(9,110)
Exercise of options	(77)	—	77	—
At 31 July 2017	(49,857)	—	(20)	(49,877)

	(6,005)	—		
Loss for the year)		—	(6,005)
Other comprehensive income	—	(13)	—	(13)
	(55,86	(13)		
At 31 July 2018	2)		(20)	(55,895)

Profit & loss represents the cumulative loss attributable to the equity holders of the Parent Company.

Historically, treasury shares included the value of Nanoco Group plc shares issued as jointly owned equity shares and held by the Nanoco Group-sponsored EBT jointly with a number of the Group's employees. At 31 July 2018 no shares in the Company were held by the EBT (2017: nil). In addition there are 12,222 (2017: 12,222) treasury shares not held by the EBT.

Company	Retained deficit £'000	Treasury shares £'000	Total revenue reserve £'000
At 31 July 2016	(25,028)	(97)	(25,125)
Profit for the year	30	—	30
Exercise of options	(77)	77	—
At 31 July 2017	(25,075)	(20)	(25,095)
Loss for the year	(50,025)	—	(50,025)
At 31 July 2018	(75,100)	(20)	(75,120)

25. Commitments

Operating lease commitments

The Group leases premises under non-cancellable operating lease agreements. The future aggregate minimum lease and service charge payments under non-cancellable operating leases are as follows:

	31 July 2018 Group £'000	31 July 2017 Group £'000
Land and buildings:		
Not later than one year	988	779
After one year but not more than five years	2,027	2,039
After five years	—	—
	3,015	2,818

Capital commitments

At 31 July 2018, the group had capital commitments amounting to £1,940,000 in respect of orders placed for capital expenditure (2017: £nil)

26. Financial risk management

Overview

This note presents information about the Group's exposure to various kinds of financial risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Executive Directors report regularly to the Board on Group risk management.

Capital risk management

The Company reviews its forecast capital requirements on a half-yearly basis to ensure that entities in the Group will be able to continue as a going concern while maximising the return to stakeholders.

The capital structure of the Group consists of equity attributable to equity holders of the Parent, comprising issued share capital, reserves and retained earnings as disclosed in notes 21 to 24 and in the Group statement of changes in equity. At 31 July 2018 total equity was £12,635,000 (2017: £10,447,000).

The Company is not subject to externally imposed capital requirements.

Liquidity risk

The Group's approach to managing liquidity is to ensure that, as far as possible, it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group manages all of its external bank relationships centrally in accordance with defined treasury policies. The policies include the minimum acceptable credit rating of relationship banks and financial transaction authority limits. Any material change to the Group's principal banking facility requires Board approval. The Group seeks to

Cash and cash equivalents	10,686	17	26	10,729	5,659	7	40	5,706
Trade receivables	280	-	10	290	43	53	15	111
Trade payables	(1,571)	(79)	(366)	(2,016)	(503)	(5)	(306)	(814)
	9,395	(62)	(330)	9,003	5,199	55	(251)	5,003

All other categories of assets and liabilities in the Statement of financial position are denominated in Sterling.

Sensitivity analysis to movement in exchange rates

The following table demonstrates the sensitivity to a reasonably possible change in the Sterling rate against other currencies used within the business, with all other variables held constant, of the Group's loss before tax (due to foreign exchange translation of monetary assets and liabilities) and the Group's equity.

Increase/(decrease)	Impact on loss before tax and Group equity 2018 £'000	Impact on loss before tax and Group equity 2017 £'000
10%	(54)	(32)
5%	(28)	(16)
(5)%	31	18
(10)%	65	39

Interest rate risk

As the Group has no significant borrowings the risk is limited to the reduction of interest received on cash surpluses held at bank which receive a floating rate of interest. The principal impact to the Group is to interest-bearing cash and cash equivalent balances held, which are as set out below:

	31 July 2018			31 July 2017		
	Fixed rate £'000	Floating rate £'000	Total £'000	Fixed rate £'000	Floating rate £'000	Total £'000
Group						
Cash and cash equivalents	—	10,729	10,729	—	5,706	5,706
Loan notes	(400)	—	(400)	—	—	—
Company						
Cash and cash equivalents	—	43	43	—	4,670	4,670

The exposure to interest rate movements is immaterial.

Maturity profile

Set out below is the maturity profile of the Group's financial liabilities at 31 July 2018 based on contractual undiscounted payments, including contractual interest.

2018	Less than one year £'000	One to five years £'000	Greater than five years £'000	Total £'000
Financial liabilities				
Trade and other payables	2,894	—	—	2,894
Convertible loan (including contractual interest)	—	—	407	407
	2,894	—	407	3,301

2017	Less than one year £'000	One to five years £'000	Greater than five years £'000	Total £'000
Financial liabilities				
Trade and other payables	1,318	—	—	1,318
	1,318	—	—	1,318

Trade and other payables are due within three months.

The Directors consider that the carrying amount of the financial liabilities approximates to their fair value.

As all financial assets are expected to mature within the next twelve months, an aged analysis of financial assets has not been presented.

The Company's financial liability, a long-term loan from a subsidiary undertaking, is due after more than five years.

27. Related party transactions

The Group

There were no sales to, purchases from or, at the year end, balances with any related party.

The Company

The following table summarises inter-company balances at the year end between Nanoco Group plc and subsidiary entities:

	Notes	31 July 2018 £'000	31 July 2017 £'000
Long-term loans owed to Nanoco Group plc by			
Nanoco Life Sciences Limited		20,286	20,286
Nanoco Technologies Limited*		3,586	3,329
	14	23,872	23,615
Less provision against debt owed by Nanoco Life Sciences Limited	14	(20,286)	(20,286)
		3,586	3,329
Short-term loan owed to Nanoco Group plc by			
Nanoco Technologies Limited**	16	60,508	47,957
Less impairment provision	16	(50,000)	—
		10,508	47,957
Long-term loan owed by Nanoco Group plc to			
Nanoco Tech Limited	18	(450)	(450)

* The movement in the long-term loan due from Nanoco Technologies Limited relates to the recharge in respect of the expense for share-based payments for staff working for Nanoco Technologies Limited and is included in investments.

** The movement in the short-term loan due from Nanoco Technologies Limited relates to transfers of cash balances between the entities for the purposes of investing short-term funds and the funding of trading losses.

There are no formal terms of repayment in place for these loans and it has been confirmed by the Directors that the long-term loans will not be recalled within the next twelve months.

None of the loans are interest bearing.

28. Compensation of key management personnel (including Directors)

	2018 £'000	2017 £'000
Short-term employee benefits	1,242	1,218
Pension costs	77	73
Benefits in kind	—	32
Share-based payments	243	188
	1,562	1,511

The key management team comprises the Directors and three members of staff (2017: two) who are not Directors of the Company. The staff members of the team are the supply chain and compliance director, the applications development director and the head of investor relations.